

WHAT IS CLAIMED IS:

1 1. A method for producing a digital model of a patient's dentition having
2 an attached attachment device, said method comprising:
3 providing a digital model of a patient's dentition;
4 providing a digital model of an attachment device; and
5 combining the digital model of the attachment device on digital model of the
6 patient's dentition to produce a digital model comprising the attachment device.

1 2. A method as in claim 1, wherein providing a digital model of the
2 patient's dentition comprises scanning the patient's teeth.

1 3. A method as in claim 1, wherein providing a digital model of the
2 patient's dentition comprises scanning a mold of the patient's teeth.

1 4. A method as in claim 1, further comprising modifying the digital
2 model of the patient's dentition prior to combining the modified digital dentition model with
3 the digital model of the attachment device.

1 5. A method as in any of claims 1 to 4, further comprising manufacturing
2 an appliance comprising a polymeric shell which conforms to the dentition and an attachment
3 device based on the combined digital model.

1 6. A method as in claim 5, wherein manufacturing comprises producing a
2 positive mold based on the combined data and fabricating the polymeric shell over the mold.

1 7. A method as in claim 1, wherein providing a digital model of the
2 attachment device comprises selecting the digital model of the attachment from a library of
3 such attachments.

1 8. A method for fabricating a dental appliance, comprising:
2 providing a digital model of a patient's dentition;
3 providing a digital model of an attachment device;
4 combining the digital model of the attachment device on the digital model of
5 the patient's dentition; and

6 from the combined digital model, fabricating the dental appliance having a
7 receptacle adapted to engage the attachment device when the appliance is worn by the
8 patient.

1 9. A method as in claim 8, wherein providing a digital model of the
2 patient's dentition comprises scanning the patient's teeth.

1 10. A method as in claim 8, wherein providing a digital model of the
2 patient's dentition comprises scanning a mold of the patient's teeth.

1 11. A method as in claim 8, further comprising modifying the digital
2 model of the patient's dentition prior to combining the modified digital dentition model with
3 the digital model of the attachment device.

1 12. A method as in claim 8, wherein fabricating comprises producing a
2 positive mold based on the combined data and molding the polymeric shell over the mold.

1 13. A method as in claim 8, wherein providing a digital model of the
2 attachment device comprises selecting the digital model of the attachment from a library of
3 such attachments.

1 14. Dental appliances produced by the methods of claims 1 or 8.